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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,191	06/30/2006	Nobuo Kushibiki	71,051-021	8417

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EXAMINER	
NELSON, MICHAEL B	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
08/05/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,191	KUSHIBIKI ET AL.	
	Examiner	Art Unit	
	MICHAEL B. NELSON	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 8-23* is/are pending in the application.

4a) Of the above claim(s) *1-3,13-17 and 19-23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4,5,8-12 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *06/30/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. The amendments filed on 06/12/08 have been entered. Claims 6 and 7 have been cancelled. Applicant's election of Group II, claims 4, 5, 8-12 and 18 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Applicant's entitlement to a rejoinder subsequent to the allowability of the product claims is acknowledged; however, since the product claims currently stand rejected (see below) the rejoinder is not appropriate at this time. Hence, claims **4, 5, 8-12 and 18** are the claims currently under examination on the merits and claims 1-3, 13-17 and 19-23 are withdrawn as being directed to non-elected inventions.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 4, 5, 8-12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kushibiki et al. (EP 0 682 271) in view of Amano et al. (U.S. 5,672,672).

Regarding claim 4, Kushibiki et al. discloses an optical polysiloxane based resin which includes between 10 and 99.99%mol of an $RSiO_{3/2}$ constituent (which reads on instant composition (A) with the range of the prior art completely overlapping the instant range of constituent (c)) (See Abstract). In Reference example (C5, L5-30), the $RSiO_{3/2}$ constituent is $PhSiO_{3/2}$, which is an aromatic hydrocarbon group having 6 carbon atoms. A second component bearing 3 hydrolyzable substituents is disclosed as being present at between 0.01 and 40 mol%, (C2, L40-55) and in the reference example (C5, L5-30), $ViMe_2SiO_{1/2}$ is the constituent, which therefore reads on composition (A), constituent (a)). Components (b) and (d) are not disclosed as being present and therefore also read on the instant recited limitations (i.e. 0% is included in those ranges). In Example 1, (C5, L30-57), the phenyltris(dimethylsiloxy)silane reads on composition (B) (See instant specification paragraph [0030]). Kushibiki et al. does not

specifically disclose the use of the polysiloxane based resin composition as being used with waveguides, even though its optical use is disclose (See Abstract).

Amano et al. discloses a polysiloxane based resin composition which is used in a waveguide application (See Abstract, and Fig. 1 and 2). The use of a polysiloxane resin blend is disclosed as being particularly advantageous due to the ability to control the relative refractive indexes of the materials in core and clad parts of the waveguide through controlling the relative weight percentages of the constituents in the blend for each material (C22, L50-65). Controlling the aromatic group content in each blend is specifically disclosed as one such refractive index effecting factor (C19, L55-65). The polysiloxane blend of Kushibiki et al. would be a particularly good blend to use in the manner as taught by Amano et al. (i.e. controlling the refractive index of the blend to make core and clad components of a waveguide) because of its high mechanical strength and heat resistance (C1, L50-55).

The inventions of both Kushibiki et al. and Amano et al. are drawn to the field of optical polysiloxane resin compositions and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have used the resin composition of Kushibiki et al. as a waveguide material as taught by Amano et al. for the purposes of imparting increase commercial applicability to the invention.

Regarding claim 5, modified Kushibiki et al. discloses all of the limitations above. Additionally, Kushibiki et al. discloses that the polysiloxane resin comprises a hydrosilation-reactive diluent (i.e. $ViMe_2SiO_{1/2}$, Reference Example, C5, L5-30), which meets the description of a hydrosilation reactive diluent as described in paragraph [0043] of the instant specification.

Regarding claims 8-12 and 18, modified Kushibiki et al. discloses all of the limitations as set forth above. Additionally, Amano et al. discloses a waveguide made from a polysiloxane resin composition in which the core and the clad structural components are made of the same general resin with different relative amounts of components (Example 2, C22, L20-C23, L25). Amano et al. also discloses that the controlling of the refractive index of the two structural components (core and clad) may be adjusted by, inter alia adjusting the amount of aromatic group containing polysiloxane components in the overall resin composition (C19, L40-65). Furthermore, having knowledge that aromatic group containing polysiloxane compounds have a different index of refraction than non-aromatic containing polysiloxane compounds, one having ordinary skill would adjust the relative amounts of these materials in a blend in order to "fine-tune" and optimize the refractive index of the overall blend. The waveguide of Amano et al. is also a film type wave guide, (Fig. 1 and 2, and Example 2, C22, L20-C23, L25).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MN/
07/10/08

/Carol Chaney/
Supervisory Patent Examiner, Art Unit 1794